

**APPLICATION I-002093\***  
**INFORMATION**

**Culclasure Farm Tract, LLC**  
**Culclasure Farm Mine**  
**Calhoun County**

- 1) Application
- 2) Reclamation Plan

*\*Information included is provided by the applicant; details may change with the public notice/ technical review process. No decision has been made on this application.*

SCANNED

11156 I-002093 ① Bc CH



Mining  
Form  
MR-400

S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
BUREAU OF LAND AND WASTE MANAGEMENT  
DIVISION OF MINING AND SOLID WASTE PERMITTING  
2600 Bull Street, Columbia, SC 29201  
Telephone Number: (803) 896-4261 Fax Number: (803) 896-4001

APPLICATION FOR A MINE OPERATING PERMIT  
DHEC FORM MR-400 DATE VERSION ADOPTED 7/1/94

\*\*\*\*\*  
"The South Carolina Mining Act," Sections 48-20-10 through 48-20-310, Code of Laws of South Carolina, 1976, as amended provides in part: "No operator may engage in mining without having first obtained from the Department an operating permit which covers the affected land and which has not been terminated, been revoked, suspended for the period in question, or otherwise become invalidated." (Section 48-20-60)  
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I. APPLICANT INFORMATION

1. Name of Company: Culclasure Farm Tract, LLC

Check form of business entity: ☐ Corporation ☐ Partnership ☒ LLC  
☐ Limited Partnership ☐ Sole Proprietorship

2. Name of Proposed Mine: Culclasure Farm Mine County: Calhoun

3. Home Office Address: 1201 Main Street, Suite 1980 (803) 748-1224  
(Street and P.O. Box) (Telephone No.)  
Columbia SC 803-748-1216  
(City) (State) (Zip Code) (Fax No.)

4. Local Office Address: Same as Home Office  
(Street and P.O. Box) (Telephone No.)

(City) (State) (Zip Code) (Fax No.)

5. Designate to which office Official Mail is to be sent (check one):

☒ Home Office ☐ Local Office

6. Name of company personnel and their title to be the contact for official business and correspondence: Thomas Gordon, Operations Manager

7. Location of Mine: Horsefeathers Lane, Calhoun County, SC Swansea, SC  
(State or County Hwy No.) (Nearest Town or City)

8. Locate accurately on a county map, USGS 7.5' Topographic Map, or draw a detailed map to scale of: (1) how to get to your local office and (2) how to get to the mine (attach to this application).

9. If land is leased, complete the following:

A. Name of landowner: \_\_\_\_\_

Landowner's Address: \_\_\_\_\_ JUL 31 2015  
(Street and PO Box) (City)  
\_\_\_\_\_  
(State) (Zip Code)

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B. Date lease became effective: \_\_\_\_\_

Date of lease termination: \_\_\_\_\_

Name of lessee: \_\_\_\_\_

## II. GENERAL CHARACTERISTICS OF MINE:

1. Material(s) to be mined: Sand and Gravel for Construction Aggregate.

2. Mining Method:

A. List equipment to be used for mining and provide a brief description as to how the mine will be operated.

Clearing & grubbing operations will be performed by a excavator & front-end loader equipped with a root rake. Cleared trees & brush will either be used to form temporary brush barriers for erosion & sedimentation control or burned. Topsoil will be removed by a loader or excavator. Some topsoil will be sold, while the remainder will be used in on-going site development or reclamation. The exposed sand will be mined by front-end loader & or excavator and loaded into customer trucks.

B. Will there be a process plant located at the mine site within the boundary of the permitted area?

☐ Yes ☒ No If no, please provide a brief description of the plant equipment and function of the plant.

The plant equipment will consist of a excavator and a front-end loader. The function of the plant will be to excavate the sand, then load into customers trucks.

3. Do you anticipate blasting as part of the mining operation? ☐ Yes ☒ No If yes, provide the distance to the nearest inhabited structure not owned or leased by the applicant. Also, provide as an attachment to this application the names and addresses of all the owners of all structures within one-half mile from the nearest point of blasting during the life of the proposed mine. How will flyrock be prevented from being projected from the permitted area?

4. Has this site been mined in the past? If so, please indicate the present condition of the land.

No mining has previously been conducted on this site.

5. What is the expected maximum depth of this mine? Provide any additional information about the final depth of the mine that would be useful to the Department. (Example: Final depth of pit will be level to adjacent road, elevation above Mean Sea Level (MSL)).

The depth of the mine will vary from location to location. The expected maximum depth of this mine will be approximately 70' below the highest adjoining terrain. the expected lowest elevation of the pit floor will be approximately elevation=280', based on MSL.

### III. DETERMINATION OF PERMITTED ACREAGE, AFFECTED ACREAGE AND RECLAMATION BOND

1. Total acres for which permit is being requested:

70 Permitted acres owned by the operator

0 Permitted acres leased by the operator

Note: Permitted acreage should include the following: 1) acres of land to be affected (excavation, processing plant, stockpiles, etc.); 2) future area(s) to be mined and 3) land to be used for buffer zones around the affected land. The permitted area should be the property described in the LAND ENTRY AGREEMENT(S) (FORMS MR-600 OR MR-700).

2. Total affected acreage:

Acres

A) Area used for sediment control ponds

\_\_\_\_\_

B) Area used for stockpiles of unprocessed minerals

\_\_\_\_\_

C) Area used for spoil (overburden) banks, topsoil and disposal refuse (exclusive of tailings impoundments)

\_\_\_\_\_

D) Areas used for on-site processing facilities and stockpiles of processed minerals

\_\_\_\_\_

E) Areas used for tailings pond (waste material from mineral processing)

\_\_\_\_\_

F) Area for access or haul roads

\_\_\_\_\_

G) Area for excavation during the period of this permit

OR

If mining and reclamation are to be done in segments, state the size of each segment (acres) 23. Multiply the size of the segments by 3 and enter the resulting number. 66

\_\_\_\_\_

H) TOTAL OF 2A THROUGH 2G

66

3. Check acreage to be bonded: total affected acreage calculated from Section 2.

☐ 0.00 - 9.99 acres (bond amount - \$10,000)

☐ 10.00 - 14.99 acres (bond amount - \$15,000)

☐ 15.00 - 24.99 acres (bond amount - \$25,000)

☒ 25.00 + acres (bond amount - \$25,000 or greater)

Applicant may submit a reclamation cost estimate for mines that will affect greater than 25 acres. Estimate should be based upon requirements in Regulation 89-200 B.

4. Will this operation be covered by a blanket bond? ☐ Yes ☒ No If yes, please list your company's other permitted mining operations in South Carolina giving mine names, permit numbers and state the present reclamation bond amount on file with this Department.

5. Number of years for which this permit is requested. The requested number of years the permit is requested should coincide with the Schedule of Reclamation as proposed by the applicant in the RECLAMATION PLAN, (Form MR-500). 25 years

#### IV. PROTECTION OF NATURAL RESOURCES

1. Will there be a waste water treatment system at your mine site? ☐ Yes ☒ No
2. Will there be a point source discharge from your plant or mine requiring an NPDES Permit? ☒ Yes ☐ No  
If yes, provide information as to how stormwater and groundwater will be managed?  
see attached sheet.
3. Will there be air contaminant emissions from your plant or mine requiring an Air Quality Permit? ☐ Yes ☒ No
4. Do you anticipate pumping of groundwater? ☒ Yes ☐ No If yes, describe.  
see attached sheet.
5. Will jurisdictional wetlands be affected, filled or altered in any fashion that will require a Section 404 Dredge and Fill Permit? ☐ Yes ☒ No
6. Are there any known cultural or historic sites located within the proposed area to be permitted? ☐ Yes ☒ No
7. Will any part of the permitted area be used as a solid waste describe how waste, trash, scrap metal material, garbage will be handled. ☐ Yes ☒ No

\*NOTE: For questions 1-7 that need additional space for explanations, please provide additional information on an attached sheet to this application.

8. Describe the wildlife or freshwater, estuarine or marine fisheries in the area of the mining operation. Also provide information about any ponds and/or streams that may be located in the proposed permitted area.

Wildlife found on the site is typical for this area of the state, with, deer, turkey, & small game in abundance. This property and surrounding properties have been historically used for recreational hunting. Water resources are abundant in the areas adjacent to the property.

9. State the land cover and land uses on the permitted land area and contiguous tracts of land to the permitted land area. The subject property is surrounded by timberlands that are a combination of planted & volunteer pines, as well as mixed hardwoods. All of the land is sandy. There is one residence to the northwest & several to the south.
10. Describe measures to be taken to insure against (1) substantial deposits of sediment in neighboring streams, rivers lakes or ponds; (2) landslides; (3) acid water formation and discharge. Attach any supporting documents (engineering designs, calculations, sediment & erosion control plan, setbacks, geotechnical information, acid prediction test etc.) to this application.
- 1 Proper on-site erosion & sediment control measures will be maintained. Sheet flow from disturbed areas that do not drain into the mine excavation will pass thru brush barriers backed by silt fencing prior to release into any streams.
- 2 Landslides will not be a problem due to the mining setbacks. All final excavation high walls will be sloped and grassed upon completion of mining in the immediate areas to prevent movement.
- 3 Due to the pH neutral quality of the groundwater and the inert quality of the materials to be mined, acid water formation will not be a problem.

## V. SAFETY

1. Describe methods to be used during the time the mine operating permit is active to prevent physical hazards to persons and to any neighboring dwelling, house, school, church, hospital, commercial or industrial building or public road. If applicable, provide the zoning designation for the property to permitted.

No schools, hospitals, churches, or commercial/industrial buildings are located within several miles of the proposed mine. The property has frontage on Horsefeathers Ln. (dirt county road). The main entrance will be off a county dirt road that ties to Hwy. 21 (Columbia Rd.). Topsoil storage berms will be erected along the road to screen the operation. Signs will be posted @<400' along the property lines warning against entry.

2. Describe methods to be used to prevent an adverse effect on the purposes of a publicly-owned park, publicly-owned forest, or publicly-owned recreation area. If any of these facilities are within one (1) mile of the proposed affected property, please locate on mine location map and the submitted U.S.G.S topographic map for this application.

No publicly-owned park, forest, or recreational area is located within one mile of the proposed mine.

3. Describe measures to be taken for screening the operation from view from public highways, public parks or residential areas.

As described in the answer to Question 1 above, an undisturbed buffer area will be left along the highway ROW's and against adjoining properties and a topsoil berm will be erected. The areas of future reserves and large buffer areas will also serve to screen the operation from the public eye.

## VI. MINE MAP

1. Provide the U.S.G.S. topographic map(s) that contains the proposed mine site. The proposed permitted area should be outlined on this submitted topographic map.
2. Attach two (2) copies of a map of the site (referred to as the MINE MAP) that shows the following:
  - A. Outline of the area to be affected by mining during the number of years for which the permit is requested. See Section III, Question 1 on page 3 of this application form.
  - B. Outline of the permitted area that shows the buffers zones, future mine areas and areas to be affected by mining.
  - C. Outline of the planned pits or excavations for which your company has detailed plans. If your company has reason to believe that additional land may be mined in the future within the permitted area but is not feasible to show as planned excavations; indicate these areas as FUTURE RESERVES on this site map.
  - D. Outline of areas for the storage of naturally occurring soil that will be suitable for the establishment of vegetation in final reclamation.
  - E. Outline of planned areas for disposal of refuse, exclusive of tailings ponds.
  - F. Outline of planned spoil, overburden or other similar waste material disposal areas.
  - G. Locations of planned access and haul roads on the area to be affected.



- H. Outline of planned tailings ponds.
- I. Locations of sediment control pond(s) and other sediment control structures within the affected area. Outline of areas on which temporary or permanent vegetation will be established to control erosion during the mine operation.
- J. Location and name (if appropriate) of streams, lakes, wetlands and existing drainage ditches within the area to be permitted. Use arrows to indicate direction of water flow in such streams and drainage ditches.
- K. Boundary for the 100 year floodplain, where appropriate.
- L. Outline of areas for stockpiles of unprocessed minerals.
- M. Outline of area of previously mined land that will not be affected.
- N. Outline of the area to be occupied by processing facilities including stockpiles of processed minerals if such facilities are to be an integral on-site part of the mining operation.
- O. Show location of the two permanent survey control points.
- P. A legend showing the name of applicant, name of the proposed mine, north arrow, county, scale, date of preparation and name and title of person who prepared the site map.

THE REQUIRED SITE MAP SHALL HAVE A NEAT, LEGIBLE APPEARANCE AND BE OF SUFFICIENT SCALE TO CLEARLY SHOW THE REQUIRED INFORMATION LISTED ABOVE. THE BASE FOR THE MAP SHALL BE EITHER A SPECIALLY PREPARED LINE DRAWING, AERIAL PHOTOGRAPH, ENLARGED USGS TOPOGRAPHIC MAP OR A RECENTLY PREPARED PLAT.

- 3. Provide the most recent county tax map that shows all contiguous land owners of the permitted mine site. Provide name and addresses of all land owners contiguous to the proposed permitted mine site.
- 4. Provide letter from an attorney attesting to (1) the ownership if the property, (2) ownership of the mineral rights and (3) that the applicant has the legal right to mine the proposed mineral resource on the property as described in this application.

**We hereby certify that all information and details contained hereinabove, within any supporting documents and on the map are true and correct to the best of our knowledge. We fully understand that any willful misrepresentation of facts will be cause for permit revocation.**

The applicant acknowledges that Section 48-20-130, Code of Laws of South Carolina, provides in part:

*"Upon receipt of the operator's annual report or report of completion of reclamation and at any other reasonable time the department may elect, the department shall inspect the permit area to determine if the operator has complied with the reclamation plan, the requirements of this chapter, regulations promulgated by its authority, and the terms and conditions of this permit. Accredited representatives of the department at all reasonable times may enter upon the land subject to the certificate of exploration or operating permit for the purpose of making the inspection."*

Signature of Applicant/Operator or his Authorized Representative

Thomas R. Gordon

Printed Name of Applicant/Operator or his Authorized Representative

Title

Operations Manager

Date

7-31-15

**Department Use Only**

Application No.: \_\_\_\_\_ Date Application Approved: \_\_\_\_\_ Date Bond Rec'd: \_\_\_\_\_

Bond Amount: \_\_\_\_\_ Blanket or Single Bond Permit Issuance Date: \_\_\_\_\_

**ACTION TAKEN ON THIS APPLICATION**

\_\_\_\_\_ Approved \_\_\_\_\_ Denied \_\_\_\_\_ Approve with additional Terms and Conditions

By: \_\_\_\_\_  
DIVISION DIRECTOR

Date: \_\_\_\_\_





Mining  
Form  
MR-500

S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
BUREAU OF LAND AND WASTE MANAGEMENT  
DIVISION OF MINING AND SOLID WASTE PERMITTING  
2600 Bull Street, Columbia, SC 29201  
Telephone Number: (803) 896-4261 Fax Number: (803) 896-4001

RECLAMATION PLAN  
DHEC FORM 500 DATE VERSION ADOPTED 7/1/94

As required in Section 48-20-90 of the South Carolina Mining Act, "An operator shall submit with his application for an operating permit a proposed reclamation plan. The reclamation plan for an operating permit only must be furnished to the local soil and water conservation district in which the mining operation is to be conducted. The plan must include as a minimum each of the elements specified in the definition of 'reclamation plan' in Section 48-20-40 and information required by the department. The reclamation plan must provide that reclamation activities, particularly those relating to control of erosion, to the extent feasible, must be conducted simultaneously with mining operations and be initiated at the earliest practicable time after completion or termination of mining on a segment of the permitted land. The plan must provide that reclamation activities must be completed within two years after completion or termination of mining on each segment of the area for which an operation permit is requested unless a longer period specifically is permitted by the department."

JUL 31 2015

✓ I. APPLICANT INFORMATION

1. Name of Company: Culclasure Farm Tract, LLC
2. Name of Proposed Mine: Culclasure Farm mine County: Calhoun
3. Home Office Address: 1201 Main St., Suite 1980 803-748-1224  
(Street and P.O. Box) (City) (State) (Zip Code) (Telephone No.)  
Columbia SC 29201 803-748-1216  
(City) (State) (Zip Code) (Fax No.)
4. Local Office Address: same as above  
(Street and P.O. Box) (City) (State) (Zip Code) (Telephone No.)
5. Name of company personnel and their title to be the contact for official business and correspondence: Thomas R. Gordon, Operations Manager
6. Location of Mine: Horsefeathers Lane, Calhoun County, SC Swansea, SC  
State or County Hwy No. Nearest Town or City

✓ II. ENVIRONMENTAL PROTECTION

1. Describe practices to protect adjacent resources such as roads, wildlife areas, woodland, cropland and others during mining and reclamation.  
See attached sheet
2. Describe proposed methods to limit significant adverse effects on adjacent surface water and groundwater resources.  
See attached sheet
3. Describe proposed methods to limit significant adverse effects on known significant cultural or historic sites within the proposed permitted area.  
There are no cultural or historic sites on the proposed property

**Section II, Question 1:**

A minimum 25'- wide woodland buffer will be left between the limit of disturbance and the adjoining property lines and along the various road frontages. Topsoil storage berms will be erected inside the undisturbed buffer in advance of mining each segment in these areas. The buffers and berms will serve visually screen the operation from the roadways and will deflect noise as well.

**Section II, Question 2:**

Adjoining areas will be protected by undisturbed buffer areas and the use of brush barriers and silt fencing. The planned mining scheme and erosion and sediment control measures, as shown on project drawings, in conjunction with the buffers, will protect these surface water resources from sedimentation.

No dumping of any materials in the mine excavation will be allowed, which will help protect ground water resources.

The highest potential for contamination of surface and ground water resources will come from the presence of petroleum products on site as required to fuel and maintain the heavy mobile equipment required in the mining process. This potential will be minimized through the use of standard controls as required by federal regulations.

Minor spills in this area and leaks from mobile equipment will be cleaned up immediately using absorbent materials and the soil will be properly disposed of off-site by a certified disposal contractor.

All employees will be trained on a regular basis in the proper handling of petroleum products, managing and cleaning up spills and proper disposal of rags, absorbent materials, and any contaminated soils in accordance with the Storm water Pollution Prevention Plan requirements of the NPDES permit.

- ✓ 4. Describe method to prevent or eliminate conditions that could be hazardous to animal or fish life in or adjacent to the permitted area.

*See attached sheet*

- ✓ 5. Describe how applicant will comply with State air quality and water quality standards as established by the S.C. Department of Health and Environmental Control.

*See attached sheet*

### III. RECLAMATION OF AFFECTED AREA

- ✓ 6. State useful purpose(s) the affected land is being proposed for reclamation. More than one purpose may be checked, but information should be submitted to support the feasibility for each proposed purpose.

- |   |  |
|---|--|
| a. Lake or pond <input checked="" type="checkbox"/> | f. Grassland <input checked="" type="checkbox"/> |
| b. Agriculture <input type="checkbox"/>             | g. Recreation <input type="checkbox"/>           |
| c. Woodlands <input type="checkbox"/>               | h. Wetlands <input type="checkbox"/>             |
| d. Residential <input type="checkbox"/>             | i. Park <input type="checkbox"/>                 |
| e. Commercial <input type="checkbox"/>              | j. Other <input type="checkbox"/>                |

- ✓ 7. State the final maximum surface gradient(s) (slope) in soil, sand, or other unconsolidated materials on reclaimed land. Surface gradients steeper than 3H:1V (18 degrees or 33 percent) may be required to submit geotechnical data and studies to demonstrate that the steeper slopes will remain stable following final reclamation.

*See Attached Sheet*

- ✓ 8. How will the final slopes in unconsolidated material be accomplished? If the slope will be by backfilling, demonstrate that there is adequate material to accomplish the stated final gradient. If gradient is to be achieved by bringing in material from outside the permitted area, state the nature of the material and approximate quantities. If the gradient is to be achieved by grading, show that there is adequate area for grading to achieve gradient (i.e., adequate distance between the property line and edge of highwall). Operator should show calculations or other appropriate information to demonstrate that there is adequate materials in backfilling and grading to meet the requirements for final slope.

*See attached sheet*

9. Describe the plan for revegetation or other surface treatment of affected area(s). The revegetation plan shall include but not be limited to the following: (a) planned soil test; (b) site preparation and fertilization; (c) seed or plant selection; (d) rate of seeding or amount of planting per acre; (e) maintenance.

*See attached Sheet*



**Section II, Question 4:**

The erosion and sediment control measures, petroleum product handling procedures, woodland buffers, and topsoil storage berms will prevent hazards to animal and fish life.

**Section II, question 5:**

Section IV-2 of the mine operating permit application describes how state water quality compliance will be achieved for storm water and ground water. These practices will be continued throughout the reclamation phase as required to protect onsite surface and ground water resources.

A state air quality permit will not be required for this operation; however, fugitive dust emissions from plant roads and product stockpiles will be controlled through the use of water sprayer system to spray the roads so the dust does not leave the premises.

**Section III, Question 6:**

The mine excavations will be primarily reclaimed to grasslands through the covering of these areas with soils as required and the application of lime and fertilizer. Some ponds may be created in lower reaches of the pits if materials below the water table are mined. These ponds will be fed by both ground water and storm water run-off from higher portions of the pit floor. The reclamation of these areas will provide opportunities for reclamation for duck habitat, and even permanent ponds.

**Section III Question 7:**

The final maximum surface gradient in unconsolidated materials will be 3:1. Perimeter slopes of the mine excavation will be graded to this slope after completion of mining in any given area.

**Section III Question 8:**

As shown on the project drawings, a disturbed buffer of sufficient width to allow the forming of the 3:1 final perimeter slope on the excavation high walls will be left between the limit of mining and the limit of the disturbance. This slope will be created by pushing down the high wall with a front-end loader and or excavator. The topsoil storage berm pushed up prior to mining will be spread down across the final slope for the establishment of grass cover.

**Section III Question 9:**

The plan for revegetation in the affected areas shall include pH soil testing to determine the rate and amount of lime and fertilizers needed. All natural native grasses and plants will be used in revegetation to restore the property to a natural state.

The rate of seeding or amount of plants per acre will be determined by soil testing and how much natural revegetation has occurred at that time.

Maintenance will consist of re-grading and re-seeding any washed out areas and replacing any dead plantings that may occur during the reclamation process.

- ✓10. Provide, as a separate document, a closure plan of the mine and permitted facilities to prevent a release of contaminants from being harmful to the environment. A closure plan is not necessary for all mines, but is required where the possibility exists for (a) acid rock drainage; (b) where the National Pollutant Discharge Elimination Systems (NPDES) Permit has discharge limitation parameters other than pH and Total Suspended Solids (TSS); (c) chemically treated tailings or stockpiles (excludes fertilizer or lime for revegetation purposes).

*See attached sheet*

- ✓11. Method of control of contaminants and disposal of mine waste soil, rock, mineral, scrap, tailings, slimes, and other material directly connected with the mining, cleaning, and preparation of mineral substances mined and includes all waste materials deposited on or in the permit area from any source.

*See attached sheet*

- ✓12. Method of reclaiming settling and/or sediment ponds.

*See attached sheet*

- ✓13. Describe method of restoration or establishment of stream channels, stream banks and site drainage to a condition minimizing erosion, siltation and other pollution.

*See attached sheet*

- ✓14. What are the maintenance plans to insure that the reclamation practices established on the affected land will not deteriorate before released by the Department?

*See attached sheet*

- ✓15. For final reclamation, submit information about practices to provide for safety to persons and to adjoining property in all excavations. Identify areas of potential danger (vertical walls, unstable slopes, unstable surface on clay slimes, etc.) and provide appropriate safety provisions. These provisions can include but are not limited to setbacks, fencing,

*See attached sheet*

- ✓16. What provisions will be taken to prevent noxious, odious, or foul pools of water from collecting and remaining on the mined area? For mines to be reclaimed as lakes or ponds, provide supporting information that a minimum water depth of four (4) feet on at least fifty percent (50%) of the pond surface area can be maintained.

*See attached sheet*

**Section III, Question 10:**

Acid drainage will not be a factor at this operation. The NPDES permit will not have discharge limitations other than the standard pH and TSS parameters because this is an aggregate operation. There will be no chemically treated tailings or stockpiles. Due to these factors, a closure plan for the mine should not be required.

**Section III, Question 11:**

Waste materials, consisting primarily of waste/oversize gravel and clay balls will be disposed of by spreading over the pit floor or backfilling against the high walls in mined areas. These areas will be properly graded to form stable slopes, covered with soil as required to support vegetative growth, and grassed on an on-going basis. Final reclamation will insure that all areas are graded and vegetated.

Importation of waste materials from other sources is not anticipated.

The only potential contaminants to be used in this process are petroleum products. All petroleum products will be removed from the site as part of mine closure. Any spillage and resulting soil contamination will be cleaned up at the time of each incident, so there will be no remaining soil or ground water contamination. ( See Section II, Question 2 for description of how petroleum products will be handled during mining.)

**Section III, Question 12:**

As indicated above, these areas will be allowed to dry out and then all final grading of banks and any required leveling of the surface will be performed. The areas will be reclaimed to grasslands with some water bodies, ponds, and wetlands.

**Section III, Question 13:**

No stream banks or channels will be disturbed by this project. Temporary site drainage channels will be properly constructed and vegetated to minimize erosion and sedimentation. Temporary lining materials needed to prevent erosion as vegetation establishes will be used as required. Permanent lining materials such as rip-rap will be used where necessary.

**Section III, Question 14:**

Maintenance lime and fertilizer applications will be done as required to sustain grass growth until specific areas are released by the Department. Inspections will be done on slopes to catch erosion problems and these problems will be corrected as required, including re-grading and re-grassing.

**Section III, Question 15:**

The minimum distance remaining at final reclamation between any adjoining property line or highway R/W and the mine excavation will be 25'. As stated previously, all perimeter excavation slopes will be graded to 3:1 and grassed as mining progresses. As indicated in section V-1 of the mine operating



permit application, warning signs will be maintained throughout the mine permit life along the adjoining property lines

**Section III, Question 16:**

All final grades will be such as to eliminate the formation of such pools of water. Any ponds left in the mine excavation will be tied to the ground water table and receive sufficient runoff from other portions of the mine to maintain them. They will also be dug out as required so that the four foot depth criteria will be met.

- ✓ 17. Identify any structures (e.g. buildings, roads) that are proposed to remain as part of final reclamation. Provide justification for leaving any structures.

*See Attached Sheet*

18. Attach two (2) copies of a map of the area (referred to as the RECLAMATION MAP) that shows the reclamation practices and conservation practices to be implemented. The following should be shown:

- A. The outline of the proposed final limits of the excavation during the number of years for which the permit is requested.
- B. The approximate final surface gradient(s) and contour(s) of the area to be reclaimed. This would include the sides and bottoms of mines reclaimed ponds and lakes.
- C. The outline of the tailings disposal area.
- D. The outline of disposal areas for spoil and refuse (exclusive of tailings ponds).
- E. The approximate location of the mean shore line of any impoundment or water body and inlet and/or outlet structures which will remain upon final reclamation.
- F. The approximate locations of access roads, haul roads, ramps or buildings which will remain upon final reclamation.
- G. The approximate locations of various vegetative treatments.
- H. The proposed locations of re-established streams, ditches or drainage channels to provide for site drainage.
- I. The proposed locations of diversions, terraces, silt fences, brush barriers or other Best Management Practices to be used for preventing or controlling erosion and off-site siltation.
- J. Proposed locations of the measures to provide safety to persons and adjoining property.
- K. Segments of the mine that can be mined and reclaimed as an ongoing basis.
- L. The boundaries of the permitted area.
- M. The boundaries of the affected area for the anticipated life of the mine.
- N. The boundaries of the 100-year floodplain, where appropriate.
- O. Identify sections of mine where the final surface gradient will be achieved by grading and/or backfilling.
- P. A legend showing the name of the applicant, the name of the proposed mine, the north arrow, the county, the scale, the date of preparation and the name and title of the person who prepared the map.

THE REQUIRED RECLAMATION MAP SHALL HAVE A NEAT, LEGIBLE APPEARANCE AND BE OF SUFFICIENT SCALE TO CLEARLY SHOW THE REQUIRED INFORMATION LISTED ABOVE. THE BASE FOR THE MAP SHALL BE EITHER A SPECIALLY PREPARED LINE DRAWING, AERIAL PHOTOGRAPH, ENLARGED USGS TOPOGRAPHIC MAP OR A RECENTLY PREPARED PLAT. RECLAMATION MAP SHOULD BE THE SAME SCALE USED FOR THE SITE MAP.

#### IV. SCHEDULE FOR IMPLEMENTATION OF CONSERVATION AND RECLAMATION PRACTICES

- ✓ 19. As stated in Section 48-20-90 of the S.C. Mining Act, reclamation activities, to the extent feasible, must be conducted simultaneously with mining operations. Identify which areas or segments of the mine are not feasible to reclaim simultaneously with mining. Provide reasons why reclamation can not proceed simultaneously with mining in these areas.

*See Attached Sheet*

**Section III, Question 17:**

No buildings are proposed to be left on site at this time. Certain roads that have been constructed will be left to serve future site use after release of the property from the mine permit. These roads will be properly graded and stabilized with grass and crusher run stone to prevent erosion.

**Section IV, Question 19:**

The office and scales area and various access roads will be utilized throughout the permit life and will not be reclaimed until the end of the permit life. Certain mined areas that have been or are scheduled to be converted to process water settling basins may not be reclaimed simultaneously with mining operations.

# Section #1

20. Section 48-20-40(16)(i) of the S.C. Mining Act requires a "time schedule, including the anticipated years for completion of reclamation by segments." This time schedule should meet the requirements of Section 48-20-90 of the Mining Act.

## SCHEDULE FOR IMPLEMENTING CONSERVATION AND RECLAMATION PRACTICES

Conservation & Reclamation Practices	Segment # or Area	Planned		*Applied		Notes
		Amount	Year	Amount	Month/Year	
Construct Haul Road	Section #1		1			
Establish Mud Mat	Mine Entrance	50'	1			Prior to mining
Stockpile Top Soil	Within SAC Disturbance					During mining
Grade-TS-Fertilize and Seed	Spot sediment control	where necessary				See note #1
Submit ARR + AOF Annually						See note #2
Notice Department once mining has ceased	Section #1		End of mining			
Grade-TS-Fertilize and Seed	Pit Area Sediment Area Access Road		End of mining			See note #3-4
Notice Dept. once Reclamations are in Place			End of Active Reclamation			
Maintain Reclamation work by Repairing erosion damage, resod when necessary	All		until reclamation Accepted by DHEC			

\* Completed by the Department

**Note # 1**

Where necessary, spot sediment control structures ( e.g., silt fences, brush barriers, stone rip rap, etc. ) will be used to control erosion and off site sediment.

**Note # 2**

ARR and AOF are required until reclamation has been accepted and GP1 permit is cancelled by the department ( Part VI of GP1 ).

**Note # 3**

Accumulated sediment will be spread out to dry then used in topsoil reclamation.

**Note # 4**

Reclamation on each segment may begin at an earlier date if mining proceeds at a rate faster than anticipated. The grading/topsoil/fertilize/seed refers to side slopes of the pit when final reclamation of the pit is to a pond.



## Section #2

20. Section 48-20-40(16)(l) of the S.C. Mining Act requires a "time schedule, including the anticipated years for completion of reclamation by segments." This time schedule should meet the requirements of Section 48-20-90 of the Mining Act.

### SCHEDULE FOR IMPLEMENTING CONSERVATION AND RECLAMATION PRACTICES

Conservation & Reclamation Practices	Segment # or Area	Planned		*Applied		Notes
		Amount	Year	Amount	Month/Year	
Construct Haul Road	Section #2		1			
Establish Mud Mat	Mine Entrance	50'	1			Prior to mining
Stockpile Top Soil	Within SAK Disturbance					During mining
Grade-TS-Fertilize and Seed	Spot Sediment control	where necessary				See note #1
Submit ARR + AOF Annually						See note #2
Notice Department once mining has ceased	Section #1		End of mining			
Grade-TS-Fertilize and Seed	Pit Area Sediment Area Access Road		End of mining			See note #3-4
Notice Dept. once Reclamations are in Place			End of Active Reclamation			
Maintain Reclamation work by Repairing erosion damage, reseed when necessary	All		until reclamation Accepted by DHEC			

\* Completed by the Department



**Note # 1**

Where necessary, spot sediment control structures ( e.g., silt fences, brush barriers, stone rip rap, etc. ) will be used to control erosion and off site sediment.

**Note # 2**

ARR and AOF are required until reclamation has been accepted and GP1 permit is cancelled by the department ( Part VI of GP1 ).

**Note # 3**

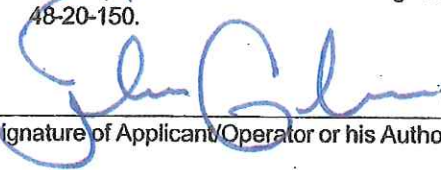
Accumulated sediment will be spread out to dry then used in topsoil reclamation.

**Note # 4**

Reclamation on each segment may begin at an earlier date if mining proceeds at a rate faster than anticipated. The grading/topsoil/fertilize/seed refers to side slopes of the pit when final reclamation of the pit is to a pond.

YOU ARE NOTIFIED THAT:

- 1) You, the operator, must file an application to modify the reclamation plan in the event actual reclamation varies from the set forth hereinabove; and
- 2) If at any time it appears to the Department that the activities under the reclamation plan are failing to achieve the purposes and requirements of the S.C. Mining Act, the Department may modify the RECLAMATION PLAN in accordance to Section 48-20-150.

  
Signature of Applicant/Operator or his Authorized Representative

Thomas Gordon  
Printed Name of Applicant/Operator or his Authorized Representative

Operations Manager  
Title

7-31-15  
Date

Department Use Only

Permit No.: \_\_\_\_\_ Date Application Approved: \_\_\_\_\_ Date Bond Rec'd: \_\_\_\_\_

Bond Amount: \_\_\_\_\_ Blanket or Single Bond: \_\_\_\_\_ Permit Issuance Date: \_\_\_\_\_

ACTION TAKEN ON THIS RECLAMATION PLAN

\_\_\_\_\_ Approved \_\_\_\_\_ Denied \_\_\_\_\_ Approved with Additional Terms and Conditions

By: \_\_\_\_\_  
DIVISION DIRECTOR

Date: \_\_\_\_\_